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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/612,733	07/10/2000	John T. Kennedy	DES-0003	9288

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EXAMINER

INZIRILLO, GIOACCHINO

ART UNIT PAPER NUMBER

2828

DATE MAILED: 05/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/612,733

Applicant(s)

KENNEDY ET AL.

Examiner

Gioacchino Inzirillo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,5,6. 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 – 16, 21, 24 – 29, 33, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erichsen et al. US 5,600,668 (herein after known as Erichsen) in view of Cantoni US 4,815,094 (herein after known as Cantoni).

Regarding claims 1, 8, 21, 25, 26, 27, 28 and 35, Fig. 1 Erichsen teaches a waveguide with a plurality of rectangular channels defined between electrodes 2 and 4. Electrodes 2 and 4 are divided into three pairs of electrodes via the grooves 6, resulting in a pairing of sections 22 and 42, 24 and 44 and 26 and 46. Reference numeral 16 teaches at least one power supply. Erichsen

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fails to teach a housing with a plurality of compartments, where once placed therein, the waveguides plurality of electrodes would be in the plurality of compartments. However, Cantoni teaches a housing in Fig. 9 of his patent, where the waveguide portion is placed therein. A housing can provide the benefit protection of components. The waveguide laser of Erichsen would then define its own compartments by virtue of its geometry. Therefore, it would be obvious to one of ordinary skill in the art to place the waveguide of Erichsen in a housing as taught by Cantoni.

Regarding claims 2 – 6, Erichsen fails to teach a shield. He does however teach grooves 6 that keep the electrodes electrically isolated, which produce the same effect.

Regarding claims 7, 24 and 29, Cantoni teaches a rounded corner in Fig. 7.

Regarding claims 9, 10 and 16 – 19, inductors are well known, and would be obvious to one of ordinary skill.

Regarding claims 11 – 15, Fig. 2 shows a channel for cooling liquid in one of the electrodes, where fin portions are formed in the electrode.

Regarding claims 33 and 34, Cantoni shows channels subtended by an angular orientation.

Determination of the optimum angle would require only routine skill in the art.

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Claims 30 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erichsen in view of Cantoni as applied to claims 1 – 16, 21, 24 – 29, 33, 34 and 35 above, and further in view of Justus et al. US 5,491,579 (herein after known as Justus). Erichsen in view of Cantoni fails to teach a periscope. However, Justus teaches that it is known to use such an arrangement in the laser art, see Justus column 1 lines 24 – 33.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erichsen in view of Cantoni as applied to claims 1 – 16, 21, 24 – 29, 33, 34 and 35 above, and further in view of Laakmann US 4,169,251 (herein after known as Laakmann). Erichsen in view of Cantoni fails to teach phase and impedance matching in a waveguide laser. However, Laakmann teaches both in column 5 lines 52 – 62 and Fig. 3. Therefore, it would be obvious to one of ordinary skill in the art to modify Erichsen in view of Cantoni to include the phase and impedance matching as taught by Laakmann.

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erichsen in view of Cantoni as applied to claims 1 – 16, 21, 24 – 29, 33, 34 and 35 above, and further in view of Smith US 3,772,611 (herein after known as Smith). Erichsen in view of Cantoni fails to teach waveguide channels designed with Fresnel numbers. However, Smith teaches this his abstract. Therefore, it would be obvious to one of ordinary skill in the art to modify channels in Erichsen in view of Cantoni to be designed with Fresnel numbers as taught by Smith.

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Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erichsen in view of Cantoni as applied to claims 1 – 16, 21, 24 – 29, 33, 34 and 35 above, and further in view of Sukhman US 5,881,087 (herein after known as Sukhman). Erichsen in view of Cantoni fails to teach an aluminum electrode. However, Sukhman teaches this in his abstract. Therefore, it would be obvious to one of ordinary skill in the art to use in Erichsen in view of Cantoni the aluminum electrodes as taught by Sukhman.

Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erichsen in view of Cantoni as applied to claims 1 – 16, 21, 24 – 29, 33, 34 and 35 above, and further in view of Morokawa US 5,654,782 (herein after known as Morokawa). Erichsen in view of Cantoni fails to teach a titanium oxide electrode. However, Morokawa teaches this in column 7 lines 7 – 10. Therefore, it would be obvious to one of ordinary skill in the art to use in Erichsen in view of Cantoni the titanium oxide electrodes as taught by Morokawa.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gioacchino Inzirillo whose telephone number is 703-305-1967. The examiner can normally be reached on M-F 8:30AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on 703-308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7721 for After Final communications.

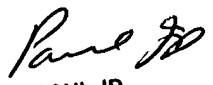
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

May 13, 2002


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